

STATEMENT OF BASIS

MAINTRAIN ETHYLENE PRODUCTION FACILITIES BATON ROUGE CHEMICAL PLANT EXXONMOBIL CHEMICAL COMPANY BATON ROUGE, EAST BATON ROUGE PARISH, LOUISIANA

Agency Interest No. 286
Activity No. PER20090019
Proposed Permit No. 2031-V8

IV. FACILITY BACKGROUND AND CURRENT PERMIT STATUS

The ExxonMobil Baton Rouge Complex was established in 1909. Manufacturing operations have been ongoing continuously at the site since that time. The ExxonMobil Chemical Company Baton Rouge Chemical Plant (BRCP) was founded in 1940 and played an important role in producing synthetic rubber for the military during World War II. It is now one of four ExxonMobil chemical manufacturing facilities in the Baton Rouge area. The Plant also has several manufacturing units that are located within the adjacent Refinery.

The site manufactures a variety of first generation petrochemical products used by others to produce a variety of consumer products. Feeds come primarily from the adjacent ExxonMobil Refinery, although feedstocks are also purchased from outside suppliers and delivered by tanker or barge.

BRCP received all its Part 70 permits for the entire facility. The following table lists all of the other units at BRCP and their permitted status:

Unit	Permit No.	Date Issued	Permitting Status
Aromatics	2299-V5	7/18/2008	Received Title V
AWT	3006-V0	6/6/2006	Received Title V
AWT Thermal Combustor	1977-V1	11/2/2009	Received Title V
BRTG	2012-V2	4/30/2009	Received Title V
Coproducts	2367-V1	5/1/2009	Received Title V
E-1000	2156-V1	12/9/2008	Received Title V
E-5000	1911-V1	12/12/2006	Received Title V
Halobutyl Production	2166-V2	1/15/2010	Received Title V
HCD	2314-V0	2/27/2006	Received Title V
IPA	1924-V3	10/11/2006	Received Title V
MEK/SBA	2281-V2	7/28/2009	Received Title V
Neo Acids	2379-V0	1/31/2008	Received Title V
NOVA Units	2123-V0	5/8/2006	Received Title V
OXO Alcohol	2365-V3	9/1/2009	Received Title V
OXO Tankfield	2393-V1	12/27/2007	Received Title V
PALA	1200-V3	12/23/2009	Received Title V
Plant Infrastructure	2390-V1	7/20/2007	Received Title V
Plasticizer	2320-V0	12/20/2005	Received Title V
POX	2210-V0	4/4/2005	Received Title V
RGR	2361-V1	8/15/2006	Received Title V
VISTALON	2376-V1	8/13/2008	Received Title V
#5 LE/Poly	2396-V0	1/31/2008	Received Title V

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V. PROPOSED PERMIT/PROJECT INFORMATION

A permit application and Emission Inventory Questionnaire (EIQ) dated December 18, 2009, were received requesting a modification of the Part 70 operating permit for Maintrain Ethylene Production Facilities. The application was deemed administratively complete in accordance with LAC 33:III.519.A on January 18, 2010.

Pursuant to LAC 33:III.519.A.4, a notice of the completeness determination was published in The Advocate, Baton Rouge, Louisiana, on February 1, 2010.

Process Description

Ethylene Production

The main function of Maintrain is to produce ethylene. The ethylene is produced by high temperature pyrolysis of liquid and/or gas petroleum fractions in tubular cracking furnaces and recovered in downstream distillation operations. Various other coproducts are also produced in the tubular steam-cracking furnaces. These coproducts include, but are not limited to, hydrogen, methane, ethane, propylene, dilute isoprene, steam-cracked naphtha, steam cracked gas oil, and tar. The feedstocks to the cracking furnaces are various petroleum fractions from either the adjacent ExxonMobil Baton Rouge Refinery (BRRF) or from outside sources.

Distillation and/or cryogenic processes separate the products that are formed in the cracking furnaces. The product ethylene and various coproducts are routed via pipelines to third parties or to other units at BRCP or BRRF, or potentially exported via the BRRF marine loading dock on the Mississippi River. In addition to the effluent from the cracking furnaces, the distillation separation facilities may be fed material from outside sources as well as from other BRCP process units.

Caustic scrubbing and various filters, molecular sieves, adsorbents, or catalysts are used to remove water or other impurities from some of the process streams. The spent caustics from these scrubbing and other scrubbing operations at BRCP are either oxidized in the Sulfidic Caustic Operations (SCOLA) Unit for reuse, or shipped out to other facilities that use the sulfidic caustics as raw materials in their processes.

Sulfidic Caustic Operations (SCOLA)

The SCOLA Unit is operated to disposition the spent sulfidic caustics that are generated from the caustic scrubbing operation in Maintrain, and other units at BRCP and BRRF. These spent caustics are either shipped out to external customers for use as raw materials, or processed by the SCOLA Unit for oxidation. At the SCOLA, the sodium sulfide and

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sodium mercaptide in spent caustics are oxidized into sodium thiosulfate and hydrocarbon disulfides.

This oxidation process uses steam and hot air. The resulting vapors containing hydrocarbon disulfides (i.e. dimethyl disulfide, methyl-ethyl disulfide, diethyl disulfide) are controlled with the SCOLA Thermal Oxidizer (Emission Point No. S-86). The oxidized caustic is then reused at BRRF.

Dilute Isoprenes Production (DILA)

The DILA Unit produces isoprene through a series of fractionation steps and extractive distillation. The feed to this unit comes from Maintrain. The first two distillation steps in the DILA Unit have been incorporated into the Maintrain permit. The resulting dilute isoprenes are sold to external customers for further purification. The remaining sources in the DILA became part of the Coproducts Units Title V Permit (2367-V1) which was issued July 20, 2007.

Proposed Modifications

In this permit modification BRCP proposed to permit four projects with this construction permit application. Each project is independently viable and justified. Should any of the proposed projects not be pursued, the remaining projects still provide benefit to BRCP. Thus they do not require aggregation under NSR. BRCP proposes to secure permit approval in one application for efficiency.

Project No. 1:

During the Maintrain Ethylene Year 2011 turnaround, BRCP proposes to install multiple enhancements to improve the unit's reliability, energy efficiency, and feed flexibility.

Major facilities changes include:

- Installation of a new caustic tower, which will eliminate caustic carryover from the existing caustic tower to downstream equipment;
- Retray of an existing tower (Emission Point No. V-547, KUT-52X) and associated piping modifications to reduce fouling;
- Increasing the suction pressure on a major process gas compressor to improve energy efficiency;
- Installation of a feed preheater to improve energy efficiency;
- Other miscellaneous changes, including but not limited to piping, vessel, tower and reactor modifications.

Construction of these changes is planned beginning in early April 2011 with majority of the construction occurring during the turnaround planned for second

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half of 2011. Initial startup will occur in 2011. Some activities will occur after the turnaround.

Project No. 2:

BRCP proposes an additional project to allow for import of additional butane as replacement for existing feedstocks. Facilities consist of piping components to route the new streams from the boundary of BRCP to the Maintrain Ethylene units. Construction start is planned for the second half of 2011. Initial startup will occur in 2012.

Project No. 3:

BRCP proposes to install two diesel-driven air compressors to supplement compressed air needs during decoking operations for steam cracking furnaces at the North Area Control Center (NACC). These new air compressors will supplement the existing NACC air compressor (Emission Point No. S-109). Construction and startup is targeted for the second half of 2010.

Project No. 4:

The last change will allow materials with higher hydrogen sulfide content to be stored in Tank 1659 (Emission Point No. T-1659). Only the H₂S emissions are changing for this tank.

Total project related emission increases in tons per year are as follows:

	VOC	NO _x	PM ₁₀	SO ₂	CO	H ₂ S
Project No. 1	0.62	3.48	0.27	0.01	2.93	-
Project No. 2	2.14	29.21	2.51	0.05	23.36	-
Project No. 3	0.24	6.40	0.36	0.01	4.38	-
Project No. 4	-	-	-	-	-	0.38
Total	3.00	39.09	3.14	0.07	30.67	0.38

VI. ATTAINMENT STATUS OF PARISH

<u>Pollutant</u>	<u>Attainment Status</u>	<u>Designation</u>
PM _{2.5}	Attainment	N/A
PM ₁₀	Attainment	N/A
SO ₂	Attainment	N/A
NO ₂	Attainment	N/A
CO	Attainment	N/A
Ozone ²	Nonattainment	Severe
Lead	Attainment	N/A

² VOC and NO_x are regulated as surrogates.

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VII. PERMITTED AIR EMISSIONS

Sources of air emissions are listed on the "Inventories" page of the proposed permit. Estimated emissions from the Maintrain in tons per year are as follows:

Pollutant	Permitted	Proposed	Change
PM ₁₀	240.70	197.00	-43.70
SO ₂	11.47	11.47	-
NO _x	1551.78	1551.78	-
CO	1592.92	1592.92	-
VOC	251.95	261.18	+9.23

Emissions changes for 1,3-butadiene, benzene, methanol, methyl ethyl ketone, n-hexane, toluene, xylenes, and VOC (8.99 TPY of 9.23 TPY) are due to consolidating emissions from cooling towers C-01 and C-05. Previously, the emissions from cooling towers have been separated into multiple permits. Now, BRCP are consolidating the emissions into the permit for the unit that is the majority user. Maintrain is the majority user for C-01 and C-05. Emissions due to these sources in the Coproducts and Plant Infrastructure permits will be removed when the permit is renewed or modified

LAC 33:III.Chapter 51-regulated toxic air pollutants (TAP), including all toxic PM₁₀ and VOC compounds, are listed below. This list encompasses all Hazardous Air Pollutants (HAP) regulated pursuant to Section 112 of the Clean Air Act. Note, however, all TAPs are not HAPs (e.g., ammonia, hydrogen sulfide).

Pollutant	Before	After	Change
1,3-Butadiene	3.55	5.78	+2.23
Acetonitrile	0.01	0.01	-
Benzene	9.51	9.42	-0.09
Biphenyl	0.10	0.10	-
Cresol	0.18	0.18	-
Cumene	0.28	0.28	-
Ethyl Benzene	6.12	6.14	+0.02
Hydrogen sulfide	7.42	7.80	+0.38
Methanol	0.87	0.97	+0.10
Methyl Tertiary Butyl Ether	0.01	0.01	-
Methyl Ethyl Ketone	0.08	0.09	+0.01
Methyl Isobutyl Ketone	0.06	0.06	-
Naphthalene	0.91	0.21	-0.70

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Pollutant	Before	After	Change
Nickel (and compounds)	0.09	0.09	-
Phenol	0.15	0.15	-
PAH	<0.01	<0.01	-
Styrene	1.67	1.69	+0.02
Sulfuric acid	1.00	1.00	-
Toluene	6.03	6.03	-
Xylene (mixed isomers)	5.02	5.03	+0.01
n-Hexane	10.55	10.53	-0.02
n-Butyl Alcohol	0.02	0.02	-

BRCP is a major source of criteria pollutants, a major source of HAPs, and a major source of TAPs.

Permitted limits for individual emissions units and groups of emissions units, if applicable, are set forth in the tables of the proposed permit entitled "Emission Rates for Criteria Pollutants" and "Emission Rates for TAP/HAP & Other Pollutants." These tables are part of the permit.

Emissions calculations can be found in Exhibit A, B, C, D, E, F, & G of the permit application. The calculations address the manufacturer's specifications, fuel composition (e.g., sulfur content), emissions factors, and other assumptions on which the emissions limitations are based and have been reviewed by the permit writer for accuracy.

General Condition XVII Activities

Very small emissions to the air resulting from routine operations that are predictable, expected, periodic, and quantifiable and that are submitted by the applicant and approved by the Air Permits Division are considered authorized discharges. These releases are not included in the permit totals because they are small and will have an insignificant impact on air quality. However, such emissions are considered when determining the facility's potential to emit for evaluation of applicable requirements. Approved General Condition XVII activities are noted in Section VIII of the proposed permit.

Insignificant Activities

The emissions units or activities listed in Section IX of the proposed permit have been classified as insignificant pursuant to LAC 33:III.501.B.5. By such listing, the LDEQ exempts these sources or types of sources from the requirement to obtain a permit under LAC 33:III.Chapter 5. However, such emissions are considered when determining the facility's potential to emit for evaluation of applicable requirements.

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VIII. REGULATORY APPLICABILITY

Regulatory applicability is discussed in three sections of the proposed permit: Section X (Table 1), Section XI (Table 2), and Specific Requirements. Each is discussed in more detail below.

Section X (Table 1): Applicable Louisiana and Federal Air Quality Requirements

Section X (Table 1) summarizes all applicable federal and state regulations. In the matrix, a “1” represents a regulation applies to the emissions unit. A “1” is also used if the emissions unit is exempt from the emissions standards or control requirements of the regulation, but monitoring, recordkeeping, and/or reporting requirements apply.

A “2” is used to note that the regulation has requirements that would apply to the emissions unit, but the unit is exempt from these requirements due to meeting a specific criterion, such as it has not been constructed, modified, or reconstructed since the regulation has been effective. If the specific criterion changes, the emissions unit will have to comply at a future date. Each “2” entry is explained in Section XI (Table 2).

A “3” signifies that the regulation applies to this general type of source (e.g., furnace, distillation column, boiler, fugitive emissions, etc.), but does not apply to the particular emissions unit. Each “3” entry is explained in Section XI (Table 2).

If blank, the regulation clearly does not apply to this type of emissions unit.

Section XI (Table 2): Explanation for Exemption Status or Non-Applicability of a Source

Section XI (Table 2) of the proposed permit provides explanation for either the exemption status or non-applicability of given federal or state regulation cited by 2 or 3 in the matrix presented in Section X (Table 1).

Specific Requirements

Applicable regulations, as well as any additional monitoring, recordkeeping, and reporting requirements necessary to demonstrate compliance with both the federal and state terms and conditions of the proposed permit, are provided in the “Specific Requirements” section. Any operating limitations (e.g., on hours of operation or throughput) are also set forth in this section. Associated with each Specific Requirement is a citation of the federal or state regulation upon which the authority to include that Specific Requirement is based.

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1. Federal Regulations

40 CFR 60 – New Source Performance Standards (NSPS)

The following subparts are applicable at the Maintrain: A, GG, IIII, and NNN. Applicable emission standards, monitoring, test methods and procedures, recordkeeping, and reporting requirements are summarized in the “Specific Requirements” section of the proposed permit.

40 CFR 61 – National Emission Standards for Hazardous Air Pollutants (NESHAP)

The following subparts are applicable at the Maintrain: A and FF. Applicable emission standards, monitoring, test methods and procedures, recordkeeping, and reporting requirements are summarized in the “Specific Requirements” section of the proposed permit.

40 CFR 63 – Maximum Achievable Control Technology (MACT)

The following subparts are applicable at the Maintrain: A, F, H, XX, YY, FFFF, ZZZZ, and GGGG. Applicable emission standards, monitoring, test methods and procedures, recordkeeping, and reporting requirements are summarized in the “Specific Requirements” section of the proposed permit.

Clean Air Act §112(g) or §112(j) – Case-By-Case MACT Determinations

A case-by-case MACT determination pursuant to §112(g) or §112(j) of the Clean Air Act was not required.

40 CFR 64 – Compliance Assurance Monitoring (CAM)

Per 40 CFR 64.2(a), CAM applies to each pollutant-specific emissions unit (PSEU) that 1) is subject to an emission limitation or standard, 2) uses a control devices to achieve compliance, and 3) has potential pre-control device emissions that are equal to or greater than 100 percent of the amount, in TPY, required for a source to be classified as a major source.

The following emission points are subject to CAM: EQT0692, RLP0124, RLP0125, RLP0128, and RLP0133. Applicable CAM provisions have been incorporated into the proposed permit as Specific Requirements.

Acid Rain Program

The Acid Rain Program, 40 CFR Part 72 – 78, applies to the fossil fuel-fired combustion devices listed in Tables 1-3 of 40 CFR 73.10 and other utility units, unless a unit is determined not to be an affected unit pursuant to 40 CFR 72.6(b). LDEQ has

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incorporated the Acid Rain Program by reference at LAC 33:III.505. BRCP is not subject to the Acid Rain Program.

2. SIP-Approved State Regulations

Applicable state regulations are also noted in Section X (Table 1) of the proposed permit. Some state regulations have been approved by the U.S. Environmental Protection Agency (EPA) as part of Louisiana's State Implementation Plan (SIP). These regulations are referred to as "SIP-approved" and are enforceable by both LDEQ and EPA. All LAC 33:III.501.C.6 citations are federally enforceable unless otherwise noted.

3. State-Only Regulations

Individual chapters or sections of LAC 33:III noted by an asterisk in Section X (Table 1) are designated "state-only" pursuant to 40 CFR 70.6(b)(2). Terms and conditions of the proposed permit citing these chapters or sections are not SIP-approved and are not subject to the requirements of 40 CFR Part 70. These terms and conditions are enforceable by LDEQ, but not EPA. All conditions not designated as "state-only" are presumed to be federally enforceable.

State MACT (LAC 33:III.Chapter 51)

BRCP is a major source of LAC 33:III.Chapter 51 regulated TAP. The owner or operator of any major source that emits or is permitted to emit a Class I or Class II TAP at a rate equal to or greater than the Minimum Emission Rate (MER) listed for that pollutant in LAC 33:III.5112 shall control emissions of that TAP to a degree that constitutes Maximum Achievable Control Technology (MACT), except that compliance with an applicable federal standard promulgated by the U.S. EPA in 40 CFR Part 63 shall constitute compliance with MACT for emissions of toxic air pollutants. Applicable Part 63 standards are addressed in Section VIII.1 of this Statement of Basis. MACT is not required for Class III TAPs; however, the impact of all TAP emissions must be below their respective Ambient Air Standards (AAS).

MACT determinations were made pursuant to Chapter 51 and are cited as LAC 33:III.5109.A in the proposed permit.

IX. NEW SOURCE REVIEW (NSR)

1. Prevention of Significant Deterioration (PSD)

The facility's source category is listed in Table A of the definition of "major stationary source" in LAC 33:III.509. As such, the PSD major source threshold is 100 TPY (of any regulated NSR pollutant).

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BRCP is a major stationary source under the PSD program, LAC 33:III.509. The emissions increases associated with the proposed facility changes (without regard to decreases) are as follows:

<u>Pollutant</u>	<u>Project Increase</u>	<u>PSD Significance Level</u>	<u>Netting Required?</u>
PM ₁₀	3.14	25/15 (PM/PM ₁₀)	No
SO ₂	0.07	40	No
NO _x	39.09	40	No
CO	30.67	100	No
H ₂ S	0.38	40	No

Increases of PM₁₀, SO₂, NO_x, CO, and H₂S associated with the proposed projects did not trigger a netting analysis; thus, further review is not required.

2. Nonattainment New Source Review (NNSR)

BRCP is a major stationary source under the NNSR program, LAC 33:III.504. The emissions increases associated with the proposed facility changes (without regard to decreases) are as follows:

<u>Pollutant</u>	<u>Project Increase</u>	<u>NNSR Significance Level</u>	<u>Netting Required?</u>
NO _x	39.09	5	Yes

Project No. 1-The contemporaneous period is from January 1, 2007 to 4th quarter of 2011.

<u>Pollutant</u>	<u>Project Increase</u>	<u>Contemporaneous Change</u>	<u>Net Emissions Increase</u>	<u>NNSR Significance Level</u>	<u>NNSR Review Required?</u>
NO _x	3.48	-8.43	-4.95	25	No
VOC	0.62	49.62	50.23	25	Yes

Project No. 2-The contemporaneous period is from January 1, 2008 to 4th quarter of 2012.

<u>Pollutant</u>	<u>Project Increase</u>	<u>Contemporaneous Change</u>	<u>Net Emissions Increase</u>	<u>NNSR Significance Level</u>	<u>NNSR Review Required?</u>
NO _x	29.21	-13.34	15.87	25	No
VOC	2.14	34.64	36.78	25	Yes

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Project No. 3-The contemporaneous period is from January 1, 2006 to 4th quarter of 2010.

<u>Pollutant</u>	<u>Project Increase</u>	<u>Contemporaneous Change</u>	<u>Net Emissions Increase</u>	<u>NNSR Significance Level</u>	<u>NNSR Review Required?</u>
NO _x	6.40	-27.07	-20.67	25	No
VOC	0.24	63.96	64.20	25	Yes

Per LAC 33:III.504.L, for any project that would result in a 25 ton or more per year cumulative increase in VOC emissions within the contemporaneous period, offset for VOC project increases is also needed. Therefore, contemporaneous netting analysis for both NO_x and VOC were conducted.

The NO_x emissions increases only associated with Maintrain are 39.09 tons per year. NO_x net emissions increases for the contemporaneous period are less than 25 TPY, so, no further NNSR evaluation for NO_x is required.

The VOC emission increases only associated with Maintrain are 3.00 tons per year. VOC net emissions increases for the contemporaneous period are greater than 25 TPY, therefore, the project related increases (3 TPY) are offset at a ratio of 1.5:1 by using internal banked BRCP credits.

A list of affected emissions units, baseline actual emissions, and projected actual emissions or potential to emit for each emissions unit, as well as a summary of contemporaneous changes associated with the proposed projects, can be found in Section 25 and Exhibit I of the permit application. This data has been reviewed by the permit writer.

Lowest Achievable Emission Rate (LAER)

In accordance with LAC 33:III.504.D.3, because internal offsets will be applied at a 1.5 to 1 ratio, LAER is not required.

Offsets

See the attached "Analysis of Validity of Emission Reductions as ERC" document.

3. Notification of Federal Land Manager

The Federal Land Manager (FLM) is responsible for evaluating a facility's projected impact on the Air Quality Related Values (AQRV) (e.g., visibility, sulfur and nitrogen

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deposition, any special considerations concerning sensitive resources, etc.³) and recommending that LDEQ either approve or disapprove the facility's permit application based on anticipated impacts. The FLM also may suggest changes or conditions on a permit. However, LDEQ makes the final decision on permit issuance. The FLM also advises reviewing agencies and permit applicants about other FLM concerns, identifies AQRV and assessment parameters for permit applicants, and makes ambient monitoring recommendations.

If LDEQ receives a PSD or NNSR permit application for a facility that "may affect" a Class I area, the FLM charged with direct responsibility for managing these lands is notified.

The meaning of the term "may affect" is interpreted by EPA policy to include all major sources or major modifications which propose to locate within 100 kilometers (km) of a Class I area. However, if a major source proposing to locate at a distance greater than 100 km is of such size that LDEQ or the FLM is concerned about potential impacts on a Class I area, LDEQ can ask the applicant to perform an analysis of the source's potential emissions impacts on the Class I area. This is because certain meteorological conditions, or the quantity or type of air emissions from large sources located further than 100 km, may cause adverse impacts. In order to determine whether a source located further than 100 km may affect a Class I area, LDEQ uses the Q/d approach.

Q/d refers to the ratio of the sum of the net emissions increase (in tons) of PM₁₀, SO₂, NO_x, and H₂SO₄ to the distance (in kilometers) of the facility from the nearest boundary of the Class I area.

$$Q/d = \frac{PM_{10(NEI)} + SO_{2(NEI)} + NO_{X(NEI)} + H_2SO_{4(NEI)}}{\text{Class I km}}^4$$

Where:

PM _{10(NEI)}	=	net emissions increase of PM ₁₀
SO _{2(NEI)}	=	net emissions increase of SO ₂
NO _{x(NEI)}	=	net emissions increase of NO _x
H ₂ SO _{4(NEI)}	=	net emissions increase of H ₂ SO ₄
Class I km	=	distance to nearest Class I area (in kilometers)

³ See <http://www2.nature.nps.gov/air/Permits/ARIS/AQRV.cfm>.

⁴ If both NNSR and PSD review are required, the higher of the two "net emissions increase" values has been selected. The net emissions increase for NNSR and PSD purposes may be different due to differing contemporaneous periods. If the net emissions increase of any pollutant is negative, the value used in the equation has been set to zero. If the project did not trigger a netting analysis, LDEQ uses the project increase (see §504.A.3 (NNSR) and §509.A.4 (PSD)). In this case, the value will be less than the pollutant's significance level.

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If $Q/d \geq 4$, LDEQ will formally notify the FLM in accordance with LAC 33:III.504.E.1 / LAC 33:III.509.P.1.

The proposed changes do not trigger PSD review. Therefore, LDEQ has determined that the proposed projects will not adversely impact visibility in Breton National Wildlife Refuge/Caney Creek Wilderness Area, the nearest Class 1 area.

4. Reasonable Possibility

As previously mentioned, increases of PM/PM₁₀, SO₂, NO_x, CO, and VOC associated with the proposed projects did not trigger PSD review. Because the applicant elected to use “potential to emit” in lieu of “projected actual emissions” for new/modified sources to determine the project increase, there is no “reasonable possibility” that the proposed projects may result in a significant emissions increase.

X. ADDITIONAL MONITORING AND TESTING REQUIREMENTS

In addition to the monitoring and testing requirements set forth by applicable state and federal regulations (see Section VIII of this Statement of Basis), a number of “LAC 33:III.507.H.1.a” and/or “LAC 33:III.501.C.6” conditions may appear in the “Specific Requirements” section of the proposed permit. These conditions have been added where no applicable regulation exists or where an applicable regulation does not contain sufficient monitoring, recordkeeping, and/or reporting provisions to ensure compliance. LAC 33:III.507.H.1.a provisions, which may include recordkeeping requirements, are intended to fulfill Part 70 periodic monitoring obligations under 40 CFR 70.6(a)(3)(i)(B).

XI. OPERATIONAL FLEXIBILITY

Emissions Caps

An emissions cap is a permitting mechanism to limit allowable emissions of two or more emissions units below their collective potential to emit (PTE). The proposed permit includes existing emissions caps. The proposed permit contains the Steam Cracking Furnaces Cap (GRP0150) and MOX Boilers Cap (GRP0151). The monitoring, recordkeeping, and reporting requirements necessary to ensure compliance with cap emission are given under these cap groups in the Specific Requirements section.

Alternative Operating Scenarios

LAC 33:III.507.G.5 allows the owner or operator to operate under any operating scenario incorporated in the permit. Any reasonably anticipated alternative operating scenarios may be identified by the owner or operator through a permit application and included in the permit. The proposed permit does include an alternative operating scenario.

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Streamlined Requirements

When applicable requirements overlap or conflict, the permitting authority may choose to include in the permit the requirement that is determined to be most stringent or protective as detailed in EPA's "White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program" (March 5, 1996). The overall objective is to determine the set of permit terms and conditions that will assure compliance with all applicable requirements for an emissions unit or group of emissions units so as to eliminate redundant or conflicting requirements. The proposed permit does contain streamlined provisions.

The Maintrain complies with a streamlined equipment leak monitoring program as in the following table:

Unit or Plant Site	Programs Being Streamlined	Stream Applicability	Overall Most Stringent Program
FUG0046 U-110 Maintrain Fugitives	40 CFR 63 Subpart UU as referenced by 40 CFR 63 Subpart YY LA non-HON MACT LAC 33:III.2122 40 CFR 61 Subpart V & J 40 CFR 60 Subpart VV	5% HAP 5% VOTAP 10% VOC 10% Benzene 10% VOC	40 CFR 63 Subpart UU as referenced by 40 CFR 63 Subpart YY
FUG0047 U-46G DILA Fugitives for C ₄ /C ₅ Loading	40 CFR 63 Subpart H 40 CFR 63 Subpart UU as referenced by 40 CFR 63 Subpart YY LA Non-HON MACT LAC 33:III.2122 NESHAP Sub J & V NSPS Subpart VV RCRA Sub BB & CC	5% VOHAP 5% HAP 5% VOTAP 10% VOC 10% Benzene 10%10% VOHAP VOC	40 CFR 63 Subpart H
FUG0048 U-47J ACLA Rack Fugitives for C ₄ /C ₅ Loading	40 CFR 63 Subpart H 40 CFR 63 Subpart YY referencing 40 CFR 63 Subpart UU LA Non-HON MACT LAC 33:III.2122 NESHAP Sub J & V NSPS Subpart VV RCRA Sub BB & CC	5% VOHAP 5% HAP 5% VOTAP 10% VOC 10% Benzene 10% VOC 10% VOHAP	40 CFR 63 Subpart H

XII. PERMIT SHIELD

A permit shield, as described in 40 CFR 70.6(f) and LAC 33:III.507.I, provides an "enforcement shield" which protects the facility from enforcement action for violations of

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applicable federal requirements. It is intended to protect the facility from liability for violations if the permit does not accurately reflect an applicable federal or federally enforceable requirement.

The proposed permit does not establish a permit shield.

XIII. IMPACTS ON AMBIENT AIR

Emissions associated with the proposed modification were reviewed by the Air Quality Assessment Division to ensure compliance with the NAAQS and AAS. LDEQ did not require the applicant to model emissions.

XIV. COMPLIANCE HISTORY AND CONSENT DECREES

BRCP's compliance history is not included in this permit application. It must be disclosed per LAC 33:III.517.E and 517.D.12, if applicable.

BRCP is subject to enforcement matters AE-CN-08-0120 and AE-PP-09-0338. BRCP is diligently working towards resolution of these actions with DEQ.

XV. REQUIREMENTS THAT HAVE BEEN SATISFIED

The following state and/or federal obligations have been satisfied and are therefore not included as Specific Requirements.

<u>Source ID</u>	<u>Citation</u>	<u>Description</u>
None		

XVI. OTHER REQUIREMENTS

Executive Order No. BJ 2008-7 directs all state agencies to administer their regulatory practices, programs, contracts, grants, and all other functions vested in them in a manner consistent with Louisiana's Comprehensive Master Plan for a Sustainable Coast and public interest to the maximum extent possible. If a proposed facility or modification is located in the Coastal Zone, LDEQ requires the applicant to document whether or not a Coastal Use Permit is required, and if so, whether it has been obtained. Coastal Use Permits are issued by the Coastal Management Division of the Louisiana Department of Natural Resources (LDNR).

The facility is not located in the Coastal Zone; therefore, a Coastal Use Permit is not required.

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XVII. PUBLIC NOTICE/PUBLIC PARTICIPATION

Written comments, written requests for a public hearing, or written requests for notification of the final decision regarding this permit action may be submitted to:

Ms. Soumaya Ghosn
LDEQ, Public Participation Group
P.O. Box 4313
Baton Rouge, Louisiana 70821-4313

Written comments and/or written requests must be received prior to the deadline specified in the public notice. If LDEQ finds a significant degree of public interest, a public hearing will be held. All comments will be considered prior to a final permit decision.

LDEQ will send notification of the final permit decision to the applicant and to each person who has submitted written comments or a written request for notification of the final decision.

The permit application, proposed permit, and this Statement of Basis are available for review at LDEQ, Public Records Center, Room 127, 602 North 5th Street, Baton Rouge, Louisiana. Viewing hours are from 8:00 a.m. to 4:30 p.m., Monday through Friday (except holidays). Additional copies may be viewed at the local library identified in the public notice. The available information can also be accessed electronically via LDEQ's Electronic Document Management System (EDMS) on LDEQ's public website, www.deq.louisiana.gov.

Inquiries or requests for additional information regarding this permit action should be directed to the contact identified on page 1 of this Statement of Basis.

Persons wishing to be included on the public notice mailing list or for other public participation-related questions should contact LDEQ's Public Participation Group at P.O. Box 4313, Baton Rouge, LA 70821-4313; by e-mail at maillistrequest@ldeq.org; or contact LDEQ's Customer Service Center at (225) 219-LDEQ (219-5337). Alternatively, individuals may elect to receive public notices via e-mail by subscribing to LDEQ's Public Notification List Service at http://www.doa.louisiana.gov/oes/listservpage/ldeq_pn_listserv.htm.

Permit public notices can be viewed at LDEQ's "Public Notices" webpage, <http://www.deq.louisiana.gov/apps/pubNotice/default.asp>. Electronic access to each proposed permit and Statement of Basis current on notice is also available on this page. General information related to public participation in permitting activities can be viewed at www.deq.louisiana.gov/portal/tabid/2198/Default.aspx.

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APPENDIX A - ACRONYMS

AAS	Ambient Air Standard (LAC 33:III.Chapter 51)
AP-42	EPA document number of the Compilation of Air Pollutant Emission Factors
BACT	Best Available Control Technology
BTU	British Thermal Units
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CAM	Compliance Assurance Monitoring, 40 CFR 64
CEMS	Continuous Emission Monitoring System
CMS	Continuous Monitoring System
CO	Carbon monoxide
COMS	Continuous Opacity Monitoring System
CFR	Code of Federal Regulations
EI	Emissions Inventory (LAC 33:III.919)
EPA	(United States) Environmental Protection Agency
EIQ	Emission Inventory Questionnaire
ERC	Emission Reduction Credit
FR	Federal Register or Fixed Roof
H ₂ S	Hydrogen sulfide
H ₂ SO ₄	Sulfuric acid
HAP	Hazardous Air Pollutants
Hg	Mercury
HON	Hazardous Organic NESHAP
IBR	Incorporation by Reference
LAER	Lowest Achievable Emission Rate
LDEQ	Louisiana Department of Environmental Quality
M	Thousand
MM	Million
MACT	Maximum Achievable Control Technology
MEK	Methyl ethyl ketone
MIK	Methyl isobutyl ketone
MSDS	Material Safety Data Sheet
MTBE	Methyl tert-butyl ether
NAAQS	National Ambient Air Quality Standards
NAICS	North American Industrial Classification System (replacement to SIC)
NESHAP	National Emission Standards for Hazardous Air Pollutants
NMOC	Non-Methane Organic Compounds

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APPENDIX A - ACRONYMS

NOx	Nitrogen Oxides
NNSR	Nonattainment New Source Review
NSPS	New Source Performance Standards
NSR	New Source Review
OEA	LDEQ Office of Environmental Assessment
OEC	LDEQ Office of Environmental Compliance
OES	LDEQ Office of Environmental Services
PM	Particulate Matter
PM10	Particulate Matter less than 10 microns in nominal diameter
PM2.5	Particulate Matter less than 2.5 microns in nominal diameter
ppm	parts per million
ppmv	parts per million by volume
ppmw	parts per million by weight
PSD	Prevention of Significant Deterioration
PTE	Potential to Emit
RACT	Reasonably Available Control Technology
RBLC	RACT-BACT-LAER Clearinghouse
RMP	Risk Management Plan (40 CFR 68)
SICC	Standard Industrial Classification Code
SIP	State Implementation Plan
SO2	Sulfur Dioxide
SOCMI	Synthetic Organic Chemical Manufacturing Industry
TAP	Toxic Air Pollutants (LAC 33:III.Chapter 51)
TOC	Total Organic Compounds
TPY	Tons Per Year
TRS	Total Reduced Sulfur
TSP	Total Suspended Particulate
µg/m ³	Micrograms per Cubic Meter
UTM	Universal Transverse Mercator
VOC	Volatile Organic Compound
VOL	Volatile Organic Liquid
VRU	Vapor Recovery Unit

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APPENDIX B – GLOSSARY

Best Available Control Technologies (BACT) – an emissions limitation (including a visible emission standard) based on the maximum degree of reduction for each pollutant subject to regulation under this Part (Part III) which would be emitted from any proposed major stationary source or major modification which the administrative authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant.

CAM - Compliance Assurance Monitoring – A federal air regulation under 40 CFR Part 64.

Carbon Monoxide (CO) – (Carbon monoxide) a colorless, odorless gas produced by incomplete combustion of any carbonaceous (gasoline, natural gas, coal, oil, etc.) material.

Cooling Tower – A cooling system used in industry to cool hot water (by partial evaporation) before reusing it as a coolant.

Continuous Emission Monitoring System (CEMS) – The total combined equipment and systems required to continuously determine air contaminants and diluent gas concentrations and/or mass emission rate of a source effluent.

Cyclone – A control device that uses centrifugal force to separate particulate matter from the carrier gas stream.

Federally Enforceable Specific Condition – A federally enforceable specific condition written to limit the potential to Emit (PTE) of a source that is permanent, quantifiable, and practically enforceable. In order to meet these requirements, the draft permit containing the federally enforceable specific condition must be placed on public notice and include the following conditions:

- A clear statement of the operational limitation or condition which limits the source's potential to emit;
- Recordkeeping requirements related to the operational limitation or condition;
- A requirement that these records be made available for inspection by LDEQ personnel;
- A requirement to report for the previous calendar year.

Grandfathered Status – those facilities that were under actual construction or operation as of June 19, 1969, the signature date of the original Clean Air Act. These facilities are not required to obtain a permit. Facilities that are subject to Part 70 (Title V) requirements lose grandfathered status and must apply for a permit.

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Lowest Achievable Emission Rate (LAER) – for any source, the more stringent rate of emissions based on the following:

- a. the most stringent emissions limitation that is contained in the implementation plan of any state for such class or category of major stationary source, unless the owner or operator of the proposed stationary source demonstrates that such limitations are not achievable; or
- b. the most stringent emissions limitation that is achieved in practice by such class or category of stationary source. This limitation, when applied to a modification, means the lowest achievable emissions rate for the new or modified emissions units within the stationary source. In no event shall the application of this term permit a proposed new or modified major stationary source to emit any pollutant in excess of the amount allowable under an applicable new source standard of performance.

NESHAP – National Emission Standards for Hazardous Air Pollutants – Air emission standards for specific types of facilities, as outlined in 40 CFR Parts 61 through 63.

Maximum Achievable Control Technology (MACT) – the maximum degree of reduction in emissions of each air pollutant subject to LAC 33:III.Chapter 51 (including a prohibition on such emissions, where achievable) that the administrative authority, upon review of submitted MACT compliance plans and other relevant information and taking into consideration the cost of achieving such emission reduction, as well as any non-air-quality health and environmental impacts and energy requirements, determines is achievable through application of measures, processes, methods, systems, or techniques.

NSPS – New Source Performance Standards – Air emission standards for specific types of facilities, as outlined in 40 CFR Part 60.

New Source Review (NSR) – a preconstruction review and permitting program applicable to new or modified major stationary sources of criteria air pollutants regulated under the Clean Air Act (CAA). NSR is required by Parts C (“Prevention of Significant Deterioration of Air Quality”) and D (“Nonattainment New Source Review”).

Nonattainment New Source Review (NNSR) – a New Source Review permitting program for major sources in geographic areas that do not meet the National Ambient Air Quality Standards (NAAQS) set forth at 40 CFR Part 50. NNSR is designed to ensure that emissions associated with new or modified sources will be regulated with the goal of improving ambient air quality.

Organic Compound – any compound of carbon and another element. Examples: methane (CH₄), ethane (C₂H₆), carbon disulfide (CS₂).

Part 70 Operating Permit – also referred to as a Title V permit, required for major sources as defined in 40 CFR 70 and LAC 33:III.507.

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PM₁₀ – particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by the method in Title 40, Code of Federal Regulations, Part 50, Appendix J.

Potential to Emit (PTE) – the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design.

Prevention of Significant Deterioration (PSD) – a New Source Review permitting program for major sources in geographic areas that meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. PSD requirements are designed to ensure that the air quality in attainment areas will not degrade.

Selective Catalytic Reduction (SCR) – A non-combustion control technology that destroys NO_x by injecting a reducing agent (e.g., ammonia) into the flue gas that, in the presence of a catalyst (e.g., vanadium, titanium, or zeolite), converts NO_x into molecular nitrogen and water.

Sulfur Dioxide (SO₂) – An oxide of sulphur.

TAP – LDEQ acronym for toxic air pollutants regulated under LAC 33 Part III, Chapter 51, Tables 1 through 3.

"Top Down" Approach – An approach which requires use of the most stringent control technology found to be technically feasible and appropriate based on environmental, energy, economic, and cost impacts.

Title V permit – see Part 70 Operating Permit.

Volatile Organic Compound (VOC) – any organic compound which participates in atmospheric photochemical reactions; that is, any organic compound other than those which the Administrator of the U.S. Environmental Protection Agency designates as having negligible photochemical reactivity.